

CLAIMS

What is claimed is:

1. A lancing device for collecting a sample of body fluid from a sampling site on the skin of a subject, said lancing device comprising an outer body housing and a lancet, the lancet being movable between a first position within the outer body housing and a second position wherein at least a sharp tip portion of the lancet extends through an opening in the outer body housing, and wherein the opening in the outer body housing has a non-circular periphery comprising a plurality of inwardly and outwardly directed lobes.
2. The lancing device of Claim 1, wherein the periphery of the opening is non-planar.
3. The lancing device of Claim 1, further comprising a raised rim around the opening.
4. The lancing device of Claim 1, wherein the opening is generally cross-shaped, comprising four lobes.
5. The lancing device of Claim 1, wherein the opening is generally star-shaped, comprising five lobes.
6. The lancing device of Claim 1, wherein the lobes are smoothly-rounded.
7. The lancing device of Claim 1, wherein the lobes comprise teeth with sharp points.
8. The lancing device of Claim 7, comprising at least one outwardly-projecting, non-planar lobe having a sharply-pointed distal tip.
9. The lancing device of Claim 1, wherein at least a portion of the outer body housing near the opening comprises a transparent material.
10. The lancing device of Claim 1, wherein the opening has an inside dimension that is smaller than a corresponding outside dimension of the lancet, thereby preventing the lancet from becoming stuck in the opening.

11. An endcap for a lancing device, said endcap comprising a first end for connection to the lancing device, and a second end defining an opening through which a sharp tip of a lancet can pass, the opening having a non-circular periphery comprising a plurality of inwardly and outwardly directed lobes.
12. The endcap of Claim 11, wherein the periphery of the opening is non-planar.
13. The endcap of Claim 11, further comprising a raised rim around the opening.
14. The endcap of Claim 11, wherein the opening is generally cross-shaped, comprising four lobes.
15. The endcap of Claim 11, wherein the opening is generally star-shaped, comprising five lobes.
16. The endcap of Claim 11, wherein the lobes are smoothly-rounded.
17. The endcap of Claim 11, wherein the lobes comprise teeth with sharp points.
18. The endcap of Claim 17, comprising at least one outwardly-projecting, non-planar lobe having a sharply-pointed distal tip.
19. The endcap of Claim 11, further comprising a transparent portion near the opening.

20. A method for acquiring an increased volume of analytic fluid from a sampling site, the method comprising the steps of:

providing a lancing device with an endcap defining a non-circular opening;

placing the lancing device against the skin so that the skin is in communication with the non-circular opening;

applying sufficient pressure on the lancing device to cause tension upon the skin within the non-circular opening;

triggering the lancing device; and

continuing to apply pressure upon the skin with the lancing device while fluid is extracted from the sampling site.

21. A method of reducing the sensation of pain by a subject during a lancing procedure, said method comprising contacting a skin surface at or adjacent a sampling site with an irregular lobed contact surface.

22. The method of Claim 21, wherein the step of contacting a skin surface at or adjacent a sampling site with an irregular lobed contact surface comprises contacting the skin surface with at least one outwardly-projecting, non-planar lobe having a sharply-pointed distal tip.